

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

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Claim 1 (currently amended) Method to provide a medium voltage interconnection for realizing an electrical connection between a receiving connector of a first equipment station and a receiving connector of a second equipment station,

said method comprising the steps of:

- providing an electrical connector mating said receiving connector at each end of a metal conductor, said metal conductor with its two connectors forming a conductive core,

- providing a flexible tube ~~made of~~ with at least, coaxially starting from the center:

a first semiconductive layer,

an insulating layer of elastomeric material,

- expanding radially said flexible tube and sliding therein said conductive core, including said two connectors inside said expanded flexible tube, and

- releasing said flexible tube over said conductive core to form an interconnection assembly.

Claim 2 (previously presented) Method according to claim 1, further comprising the steps of:

- providing said electrical connector with a substantially conical shape having a base with a diameter relatively larger than a diameter of said metal conductor, and
- connecting said base to an end of said metal conductor.

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Claim 3 (original) Method according to claim 1, further comprising the step of engaging one end of said flexible tube into an inner side of a conical bushing means made of insulating material and provided with said receiving connector so as to bring the electrical connector of the conductive core into contact with said receiving connector and said insulating layer of said flexible tube into contact with said inner side of said bushing means.

Claim 4 (currently amended): Method according to claim 1, comprising the steps of providing said flexible tube with, coaxially starting from the center:

- a said first semiconductive layer,
- ~~an~~ said insulating layer made of elastomeric material, and
- a second semiconductive layer.

Claim 5 (currently amended): Method according to claim 3, comprising the steps of providing said flexible tube with, coaxially starting from the center:

- a said first semiconductive layer,
- ~~an~~ said insulating layer made of elastomeric material, and
- a second semiconductive layer, and

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further comprising the step of removing partially said second semiconductive layer at the end of said flexible tube prior to the step of engaging said end of said flexible tube into said bushing means.

Claim 6 (original) Method according to claim 4, comprising the steps of:

- providing a ring groove into said first semiconductive layer, and
- providing a ring groove partially into said insulating layer.

Claim 7 (original) Method according to claim 1, further comprising the steps of:

- providing an external locking ring onto at least one electrical connector of said conductive core, and
- providing into said flexible tube at least one internal ring groove for receiving the locking ring of said electrical connector when the tube is released over said conductive core.

Claim 8 (original) Method according to claim 1, wherein said flexible tube has the same length as said conductive core.

Claim 9 (currently amended): A medium voltage interconnection, adapted to electrically connect a receiving connector of a first equipment station and a receiving connector of a second equipment station, said interconnection comprising a conductive core including a metal conductor with, at each end thereof, an electrical connector adapted to mate said receiving connector, and a flexible tube having, coaxially starting from the center, a first semiconductive

layer, and ~~at least~~ an insulating layer made of elastomeric material and covering the whole
conductive core; and

wherein said flexible tube is placed over said conductive core by radially expanding said
flexible tube, relatively sliding said conductive cone inside said flexible tube, and releasing said
flexible tube over said conductive core.

Claim 10 (original) Medium voltage interconnection according to claim 9, wherein said
elastomeric material is a synthetic terpolymer of ethylene, propylene and diene [EPDM].

Claim 11 (original) Medium voltage interconnection according to claim 9, wherein said
elastomeric material is a silicone.

Claim 12 (previously presented) Medium voltage interconnection according to claim 9,
wherein said electrical connector has a substantially conical shape having a base connected to
said metal conductor, said base having a diameter relatively larger than a diameter of said metal
conductor.

Claim 13 (original) Medium voltage interconnection according to claim 12, wherein one
end of said flexible tube is adapted to be engaged into an inner side of a conical bushing means
made of insulating material and provided with said receiving connector, the electrical connector
of said conductive core being adapted to be brought into electrical contact with said receiving

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connector, and said insulating layer of said flexible tube being adapted to be brought into contact with said inner side of said bushing means.

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Claim 14 (original) Medium voltage interconnection according to claim 13, wherein said interconnection is provided with a fixing ring located over said conductive core and over said flexible tube, said fixing ring being adapted to abut against the base of the conical electrical connector and to be fixed to said bushing means.

Claim 15 (currently amended): Medium voltage interconnection according to claim 9, wherein said flexible tube is a multi-layer tube comprising, coaxially starting from the center, a said first semiconductive layer, ~~an~~ said insulating layer made of elastomeric material, and a second semiconductive layer.

Claim 16 (original) Medium voltage interconnection according to claim 9, wherein the electrical connector of said conductive core is provided with an external locking ring mating in an internal ring groove in the insulating layer of said flexible tube.

Claim 17 (currently amended): A method of making an interconnection, comprising the steps of:

providing a conductive core having a first electrical connector at one end of the conductive core and a second electrical connector at the other end of the conductive core;

providing a flexible tube ~~made of at least~~ having, coaxially starting from the center, a first semiconductive layer and an insulating layer of elastomeric material;

expanding said flexible tube and relatively sliding said conductive core, including at least said first electrical connector, inside said expanded flexible tube; and

releasing said flexible tube over said conductive core to form an interconnection assembly.

Claim 18 (previously presented) The method of making an interconnection according to claim 17, further comprising the step of electrically interconnecting a first equipment station to a second equipment station with said interconnection assembly.

Claim 19 (previously presented) The method of making an interconnection according to claim 17, wherein said first and second connectors have a substantially conical shape, and wherein said flexible tube is expanded and released over at least said first connector having the substantially conical shape.

Claim 20 (previously presented) The method of making an interconnection according to claim 19, wherein each of said first and second connectors axially expands from the respective end of said conductive core towards a center of said conductive core between said first and second connectors.

Claim 21 (previously presented) The method of making an interconnection according to claim 18, further comprising the step of passing a medium voltage through said interconnection assembly.

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Claim 22 (previously presented) The method of making an interconnection according to claim 18, further comprising the step of engaging one end of said flexible tube into an inner side of a bushing made of insulating material that is provided with said first equipment station so as to bring said first electrical connector into contact with a receiving connector of said first equipment station and said insulating layer of said flexible tube into contact with said inner side of said bushing.

Claim 23 (previously presented) Method to provide a medium voltage interconnection according to claim 1, further comprising the step of passing a medium voltage through said interconnection assembly.

Claim 24 (previously presented) Method to provide a medium voltage interconnection according to claim 23, wherein said medium voltage passing through said interconnection assembly is greater than 1kV.

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Claim 25. (new) A method of providing a medium voltage interconnection for realizing an electrical connection between a receiving connector of a first equipment station and a receiving connector of a second equipment station,

said method comprising the steps of:

- providing an electrical connector mating said receiving connector at each end of a metal conductor, said metal conductor with its two connectors forming a conductive core;
- providing a flexible tube made of at least an insulating layer of elastomeric material;
- expanding radially said flexible tube and sliding therein said conductive core, including said two connectors inside said expanded flexible tube; and
- releasing said flexible tube over said conductive core to form an interconnection assembly; and

further comprising the step of engaging one end of said flexible tube into an inner side of a conical bushing means made of insulating material and provided with said receiving connector so as to bring the electrical connector of the conductive core into contact with said receiving connector and said insulating layer of said flexible tube into contact with said inner side of said bushing means.

Claim 26. (new) A method of providing a medium voltage interconnection for realizing an electrical connection between a receiving connector of a first equipment station and a receiving connector of a second equipment station,

said method comprising the steps of:

- providing an electrical connector mating said receiving connector at each end of a metal conductor, said metal conductor with its two connectors forming a conductive core;
- providing a flexible tube made of at least an insulating layer of elastomeric material;

- expanding radially said flexible tube and sliding therein said conductive core, including said two connectors inside said expanded flexible tube; and

- releasing said flexible tube over said conductive core to form an interconnection assembly; and

further comprising the steps of:

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- providing an external locking ring onto at least one electrical connector of said conductive core, and

- providing into said flexible tube at least one internal ring groove for receiving the locking ring of said electrical connector when the tube is released over said conductive core.

Claim 27. (new): A medium voltage interconnection, adapted to electrically connect a receiving connector of a first equipment station and a receiving connector of a second equipment station, said interconnection comprising a conductive core including a metal conductor with, at each end thereof, an electrical connector adapted to mate said receiving connector, and a flexible tube having at least an insulating layer made of elastomeric material and covering the whole conductive core; and

wherein said flexible tube is placed over said conductive core by radially expanding said flexible tube, relatively sliding said conductive cone inside said flexible tube, and releasing said flexible tube over said conductive core; and

wherein said electrical connector has a substantially conical shape having a base connected to said metal conductor, said base having a diameter relatively larger than a diameter of said metal conductor; and

wherein one end of said flexible tube is adapted to be engaged into an inner side of a conical bushing means made of insulating material and provided with said receiving connector, the electrical connector of said conductive core being adapted to be brought into electrical contact with said receiving connector, and said insulating layer of said flexible tube being adapted to be brought into contact with said inner side of said bushing means.

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Claim 28. (new): A medium voltage interconnection, adapted to electrically connect a receiving connector of a first equipment station and a receiving connector of a second equipment station, said interconnection comprising a conductive core including a metal conductor with, at each end thereof, an electrical connector adapted to mate said receiving connector, and a flexible tube having at least an insulating layer made of elastomeric material and covering the whole conductive core; and

wherein said flexible tube is placed over said conductive core by radially expanding said flexible tube, relatively sliding said conductive cone inside said flexible tube, and releasing said flexible tube over said conductive core; and

wherein the electrical connector of said conductive core is provided with an external locking ring mating in an internal ring groove in the insulating layer of said flexible tube.

Claim 29 (new): A method of making an interconnection, comprising the steps of:
providing a conductive core having a first electrical connector at one end of the conductive core and a second electrical connector at the other end of the conductive core;
providing a flexible tube having an insulating layer of elastomeric material;

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expanding said flexible tube and relatively sliding said conductive core, including at least said first electrical connector, inside said expanded flexible tube; and

releasing said flexible tube over said conductive core to form an interconnection assembly; and

further comprising the steps of:

electrically interconnecting a first equipment station to a second equipment station with said interconnection assembly; and

engaging one end of said flexible tube into an inner side of a bushing made of insulating material that is provided with said first equipment station so as to bring said first electrical connector into contact with a receiving connector of said first equipment station and said insulating layer of said flexible tube into contact with said inner side of said bushing.
